

AWARD OF MERIT

LONGEVITY CATEGORY

Sound of the Sea II Condominiums

EMERALD ISLE, NORTH CAROLINA

SUBMITTED BY SKA CONSULTING ENGINEERS, INC.—GREENSBORO, NC

Sound of the Sea II Condominiums were constructed in 1984, and consist of a six-level reinforced concrete building with 36 individually owned units. It is located on the 3/4 mile (1.2 km) wide Bogue Banks barrier island within a few hundred feet of the Atlantic Ocean in Emerald Isle, NC. The facility includes exterior common access corridors (walkways) on the front side of the building and private balconies at each unit.

A \$1.2M repair and cathodic protection project was undertaken in 2007 to address corrosion-related distress and deterioration of corridors, balconies, roof parapets, and other components at the condominium building. Structural concrete repairs included replacement of balcony slab edges and repairs at slabs, columns, and walls. A number of challenges were encountered during the project, including coordination for reuse of guardrails, budgetary constraints, repair of extensive unknown damage, coordination to leave balcony sliding glass doors in place and protected during the project, and time constraints.



The project included impressed current cathodic protection (ICCP) on approximately 4,660 sf (435 m²) of balconies and local galvanic protection in other areas. Depolarization testing conducted in 2008 and 2019 at embedded reference cells in balconies has shown that the impressed current system is effectively protecting steel. Coatings have also performed well and are still in use. Owners have communicated that a relatively low amount of maintenance has been needed over the past 10 years. Review of the building has confirmed that repairs have held up well and the cathodic protection system is providing protection, despite a number of hurricanes that have impacted the area since 2008.

This project is an excellent example of how ICCP can provide long-term service-life extension and that strategically selecting different preservation strategies on a building can provide an economical, effective long-term benefit.



Sound of the Sea II Condominiums

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